EXHIBIT XXX

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August 4, 2021

Ms. Brittany Primavera
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RE: Expert Report of Gerald M. LaPorte, B. Sc., B. Comm., M.S.F.S.
Riley Welch LaPorte & Associates Forensic Laboratories
Our Case No.: 21-032
United States District Court Southern District of New York

JENNIFER S. FISCHMAN v MITSUBISHI CHEMICAL HOLDINGS AMERICA, INC.; MITSUBISHI CHEMICAL HOLDINGS CORPORATION; NICOLAS OLIVA, in his individual and professional capacities; DONNA COSTA, in her individual and professional capacities; and JOHN DOES 1-10, in their individual and professional capacities

Civil Action No. 18-cv-08188 (JMF)

I. BACKGROUND

1. I submit this report on behalf of Defendants. I have been retained by Gordon Rees Scully Mansukhani to conduct a forensic examination and expert analysis of certain documents further described in Section III of this report.

2. On July 29, 2021, I performed an inspection of certain production documents at the law office of Valli Kane & Vagnini LLP located at 600 Old Country Road (Suite 519) in Garden City, New York. Also present from my firm was Ms. Jennifer Naso, a Board-Certified Forensic Document Examiner, who received her training with the United States Secret Service. Ms. Naso transported testing equipment from her office in the New York City area that will be further described; captured high resolution photographs; and performed

examinations for indented or impressed writing using an Electrostatic Detection Apparatus (ESDA) under my supervision, which will be described in Section VI(B). I performed all the remaining testing, including the chemical analysis of the inks, and reviewed the results from the indented writing examinations performed by Ms. Naso.

3. In this report, I provide my qualifications; a description of the documents I examined; the bases for the methods used for the testing; the results from my examinations and testing; and my opinions. I am being compensated in this matter at a rate of $500 per hour and my compensation is not contingent on my findings, testimony rendered, or the outcome of this litigation.

II. QUALIFICATIONS

4. I am a Forensic Chemist and Document Dating Specialist with Riley Welch LaPorte & Associates Forensic Laboratories. I have 28 years of experience in the field of forensic science and 20 years of experience performing physical and chemical examinations on a variety of documents to determine how they were produced, where they may have originated from, when they were created, and whether they are authentic.

5. I am also employed with Florida International University where I am the Director of Research Innovation at the Global Forensic and Justice Center. As of July 2019, I retired as the Director in the Office of Investigative and Forensic Sciences at the National Institute of Justice, which is within the United States Department of Justice.

6. Prior to my position with the United States Department of Justice, I served as the Chief Research Forensic Chemist in the Forensic Services Division at the United States Secret Service. I trained with the United States Secret Service in the field of forensic

document examination, specializing in the area of ink and paper analysis, as well as authenticating documents.

7. I was designated by the United States Secret Service as a "National Expert" in the forensic examination of documents created by printers and copiers. In order to achieve this status, I was required to have published articles in the topic area in peer reviewed publications, qualified as an expert witness in the subject area in criminal court, and recognized by my peers as an expert in the area of printers and copiers by teaching workshops and working cases that were referred by other State, Federal, and International forensic laboratories.

8. For three years, I served as the co-chair of the Standards Practices and Protocols Interagency Working Group (SPPIWG), under the Office of Science and Technology Policy within the Executive Office of the President of the United States.

9. I was selected by the Attorney General of the United States to serve as a Commissioner on the National Commission on Forensic Science from 2014 through 2017. This Commission was composed of esteemed scientists, law enforcement officials, prosecutors, defense attorneys, and judges, with the underlying objective to enhance the practice of forensic science.

10. I currently serve as the Chairperson on the Forensic Document Examination Subcommittee on the Organization of Scientific Area Committees (OSAC) for Forensic Science, which works to strengthen the nation's use of forensic science by facilitating the development of technically sound forensic science standards and by promoting the adoption of those standards by the forensic science community.

11. I am the co-editor of the Journal for the American Society of Questioned Document Examiners.

12. I am a member of the American Academy of Forensic Sciences (AAFS) and the American Society of Questioned Document Examiners (ASQDE). I was also a contributing member in the Scientific Working Group for Questioned Documents (SWGDOC) and served as a Technical Contact when standards were developed for the questioned document community.

13. I participated in the European Document Experts Working Group (EDEWG) and have been a contributing member of the International Collaboration for Ink Dating (INCID), an international group dedicated to collaborating on methods for ink dating.

14. I have organized and personally conducted more than 100 lectures, seminars, and training events in over 15 different countries for law enforcement agencies, professional organizations, and technical experts.

15. I have published several scientific papers in the area of forensic document examination and authored three textbook chapters in the **Forensic Chemistry Handbook** (*Chemical Analysis Techniques Used in Forensic Document Examinations*), **The Wiley Encyclopedia of Forensic Sciences** (*Documents, Forgeries and Counterfeits*), and **Forensic Chemistry Fundamentals and Applications** (*Chemical Analysis for the Scientific Examination of Questioned Documents*).

16. I have testified over 100 times in County, State, Federal, and International courts. I have never been excluded from testifying as an expert witness, nor have my opinions been criticized by a fact finder in any County, State, Federal, or International court, arbitration or administrative proceeding.

17. A full and complete copy of my curriculum vitae is included in **Attachment 1**.

III. DOCUMENTS RECEIVED FOR EXAMINATION

18. On July 29, 2021, I received the following documents from a representative at the law office of Valli Kane & Vagnini LLP in Garden City, New York:

Q1 One (1) piece of lined paper containing written entries in a column format with the names at the top of each column reading "Jen" "Kathryn" "Andy +3" and "Nick". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000788. A true and accurate copy of Q1 (000788) is included as **Attachment 2**.

Q2 A black covered spiral bound notebook titled "CAMBRIDGE® Limited" on the cover bearing numerous pages with handwritten entries. Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000789 through 000824.

Q3 A copy of what appears to be an envelope addressed to "Ms. Jennifer Stome Fishman". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000825.

Q4 A copy of a letter beginning "Merry Christmas and Best Wishes for happy new year". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000826.

Q5 One (1) piece of lined paper bearing handwritten entries beginning, "MLA Morgan Applied Sole U.S. Counsel". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000827. A true and accurate copy of Q5 (000827) is included as **Attachment 3.**

Q6 One (1) piece of lined paper bearing handwritten entries beginning with notes in the top left reading "N.Y. Labor; CBRE". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000828. A true and accurate copy of Q6 (000828) is included as **Attachment 4.**

Q7 A one-page email dated 12/05/16 beginning, "Dear Jennifer, I have worked with a lot of attorneys ...". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000829.

Q8 One (1) piece of paper bearing handwritten entries on both sides, dated 3/1/16. Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000830 and 000831. A true and accurate copy of Q8 (000830/000831) is included as **Attachment 5.**

Q9 A copy of what appears to be an envelope addressed to "Jennifer Fishman Esq." and a letter beginning, "Dear Jennifer, Thank you for taking care ...". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000832.

Q10 A one-page email dated 08/03/2015 beginning, "He was registered for both days ...". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000833.

Q11 A piece of note paper beginning, "Oerlikon Westbury, N.Y." and piece of note paper beginning, "2016 2.3B Swiss Franks". Based on a PDF copy I received prior to the inspection and examination, these documents were Bates-stamped FISCHMAN 000834.

Q12 A one-page machine printed document beginning, "To be delivered by N. Oliva in person, ..." also containing a handwritten note along the right edge beginning "NEVER" and a handwritten note at the bottom reading, "JSF Nick authorized in office mtg ...". Based on a PDF copy I received prior to the inspection and examination, this document was Bates-stamped FISCHMAN 000835. A true and accurate copy of Q12 (000788) is included as **Attachment 6.**

IV. REQUEST

19. I was requested to conduct forensic examinations and testing of Q1 (000788), Q5 (000827), Q6 (000828), Q8 (000830 and 000831), Q11 (000834), and Q12 (000835) to determine whether the written entries were executed on or around their purported dates or on a date more recently.

V. SUMMARY OF OPINIONS

20. Based on my forensic testing, including physical, microscopic, optical, and chemical analysis, the following is a summary of my final opinions:

(a) It is highly probable [1] that the handwritten entries on both sides of Q8 (000830/000831) were not executed on the purported date of March 1, 2016. Instead, the written entries were executed within two (2) years before I performed my testing, which would have been sometime after July 31, 2019. I performed a chemical analysis to measure the amount of a volatile organic compound (VOC), referred to as 2-phenoxyethanol (2-PE). The level of 2-PE stabilizes over a period of approximately six to eighteen months as an ink goes through a complex drying process and is not significant much beyond two years after the ink has been applied to paper. However, the levels of 2-PE were extremely high, along with other test results, which are consistent with an ink is still in a very 'fresh' stage (e.g., less than 6 months old).

(b) Q8 (000830/000831) was altered by adding the date "3/1/16" to the document using a different ink than what was used for the handwritten notes appearing on both sides of the document.

(c) There are two (2) handwritten entries that have been added to Q12 (000835) on the right side of and beneath the text printed paragraph using the same formulation of ink that was used for the handwritten notes on Q8 (000830/000831). It is probable[2]

[1] The forensic document community relies on the Scientific Working Group for Forensic Document Examiners: Standard Terminology for Expressing Conclusions of Forensic Document Examiners. "Highly Probable" is used to describe evidence that is very persuasive, and the examiner is virtually certain, but there is some factor that precludes the examiner from reaching absolute certainty. The "highly probable" threshold is one of virtual certainty based on the results from the examination and testing.

[2] The forensic document community relies on the Scientific Working Group for Forensic Document Examiners: Standard Terminology for Expressing Conclusions of Forensic Document Examiners. "Probable" is used to describe strong evidence that is persuasive. The "probable" conclusion is one of very high confidence based on the results from the examination and testing.

that the handwritten notes were not created until after July 31, 2019, which would be sometime in the two (2) years prior to my analysis. The results from the chemical testing are not consistent with an ink that is allegedly 4 ½ years old and are far more supportive of an ink that is less than two (2) years old.

(d) With respect to Q6 (000828), nearly all of the handwritten entries were executed with blue non-ballpoint writing ink (e.g., gel ink, felt tip pens, and roller-ball pens); however, there are no generally accepted methods to estimate the age since non-ballpoint inks are primarily water-based and do not contain solvents that persist over months or years like ballpoint inks; and

(e) While I did examine the remaining documents, I did not perform ink dating analysis, and therefore, I cannot conclude whether or not the written entries on Q1 (000788), Q5 (000827), and Q11 (0000834) were executed sometime within the past two (2) years.

VI. REASONS AND BASES FOR EXAMINATIONS

21. I performed a series of physical, optical, and chemical examinations using widely accepted procedures. As part of my testing, I also rely, in part, on published standards distributed by the Scientific Working Group for Forensic Document Examiners (SWGDOC).[3] The following is a list of six (6) standards applicable to the testing I conducted:

A. SWGDOC Standard for Scope of Work of Forensic Document Examiners

B. SWGDOC Standard for Examination of Altered Documents

[3] The SWGDOC standards can be found at the following web link: http://www.swgdoc.org/index.php/standards/published-standards

C. SWGDOC Standard for Test Methods for Forensic Writing Ink Comparison

D. SWGDOC Standard for Indentation Examinations

E. SWGDOC Standard for Non-destructive Examination of Paper

F. SWGDOC Standard Terminology for Expressing Conclusions of Forensic Document Examiners

22. A description and the scientific basis of the procedures I used are described in the following paragraphs of Section V.

A. Physical Examinations: Visual and Microscopic

23. Physical examinations include non-destructive methods for inspecting the documents visually with an appropriate magnification device and/or light source. This portion of the examination is necessary to determine how a questioned document was produced and whether the written entries are original (i.e., created with a writing instrument) or reproductions (e.g., photocopied or scanned and printed).

24. The text, format, and/or images on documents can be printed using various methods. These methods of production are referred to as printing processes and are identifiable using a magnifying device with an appropriate light source. The most common types of home and office machines utilize toner (e.g., photocopiers, laser printers, and some facsimile machines) or inkjet technology (e.g., inkjet printers and some types of multifunction machines capable of scanning, copying, faxing, and printing). Typically, inkjet ink absorbs into the paper and appears planar, or flat, when visualized with a microscope. Toner consists of a particulate material and sits on top of the paper, which appears to have a three-dimensional effect when observed with magnification

25. Writing inks can be classified into ballpoint, non-ballpoint (e.g., roller ball, felt tip, gel), and fountain pen inks based on their unique microscopic characteristics that result from the combination of their differential chemical composition and interactions with paper. Determining the type and color of a writing ink is commonly reported following a physical examination and is further described in the *Standard for Test Methods for Forensic Writing Ink Comparison,* which is published and endorsed by SWGDOC.

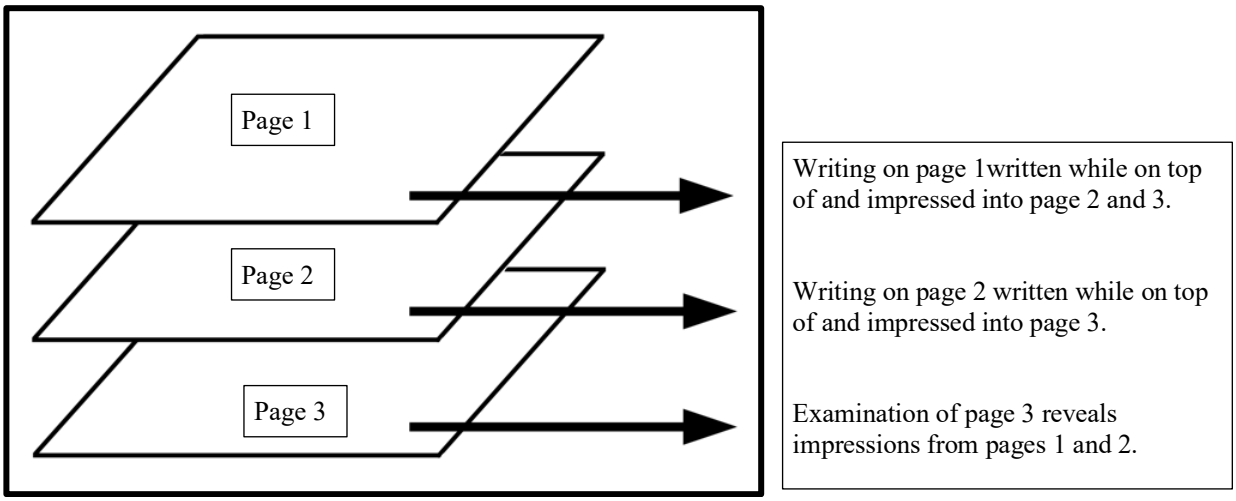
B. Physical Examinations: Indented Writing and Impression Evidence

26. Documents can be examined for the presence of indented writing or other identifying impressions (e.g., markings from printing devices), which can appear on paper from writings or other markings made to another page while it was superimposed over the questioned material. In this case, an Electrostatic Detection Apparatus™ (ESDA) was used to recover potential impressions that could indicate what was written on top of the questioned document(s).

27. Whenever two or more sheets of paper are stacked or placed on top of one another, traces of the writing executed on the top page tend to become impressed into the sheet or sheets below. These impressions can be vital in associating whether two documents purportedly prepared at significantly different times were created on their purported dates.

28. The following illustration in **Figure 1** shows the sequence of how writing can be transferred and then impressed into the underlying sheet or sheets of paper.

Figure 1: An illustration showing how written impressions can be transferred to an underlying questioned document, which can then be examined to show what was previously written atop of the questioned document.



29. Impressions can sometimes be seen with the naked eye, whether unaided or with the use of a microscope. Often, however, special techniques must be used. One technique involves utilizing grazing light, where the document is viewed while moving a strong light source, such as a fiber optic light, at various angles and directions. The results can then be captured utilizing digital photography.

30. The most common technique used to recover impression evidence, however, is by utilizing electrostatic processing of a document with an electrostatic detection device (EDD). The most common EDD used, which is the one utilized by our firm, is the Electrostatic Detection Apparatus™ (ESDA and is manufactured by Foster & Freeman (see below images provided by Foster & Freeman).

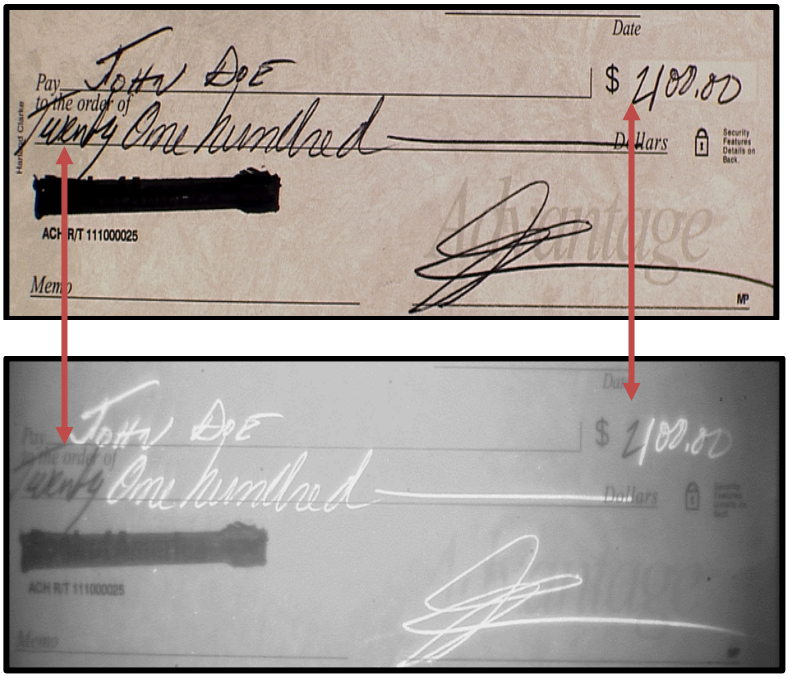
31. As described in the *SWGDOC Standard for Indentation Examinations*, in electrostatic processing, the document being examined is placed on a vacuum bed and covered with a thin clear plastic film. An electrical charge is then placed on the surface of the document by passing a wand containing a high voltage charge over the surface of the

film. Next, tiny glass beads coated with black toner are cascaded over the surface of the clear plastic film. Due to the presence of the electrical charge, the toner fills in the impressed areas on the document. Finally, the developed toner image is fixed by encapsulating the toner with a lamination film containing an adhesive. The film adheres and fixes the toner, and then is placed onto a white backing. This is called an ESDA "lift." In an ESDA lift, impressions appear as dark lines and visible writing generally appears as white lines.

C. Optical Examinations

32. Optical examinations, also referred to as filtered light examinations, are non-destructive and can provide valuable insight regarding the overall composition of ink and paper. Ink and paper are made from components that respond differently to different wavelengths of light, sometimes in regions of the electromagnetic spectrum beyond what the human eye is capable of seeing. The presence of colorants and other materials will directly affect the manner in which inks and paper absorb, reflect, and transmit light. Ultraviolet (UV), infrared reflectance (IRR) and infrared luminescence (IRL) illumination are energy sources that can be used to evaluate the properties of an ink. Forensic document examiners commonly use a Video Spectral Comparator (VSC) for this type of examination. I used a VSC 80, which is equipped with cameras, lights, and filters that allow me to conduct detailed examinations, while controlling both the wavelength of light being used to assess UV, IRR, and IRL characteristics of the writing inks. **Figure 2** below shows an example of two different black writing inks that appear to be the same under normal lighting conditions but are determined to be different once visualized in the infrared region.

Figure 2: The top image is a check viewed with standard visible light and the bottom image is the check viewed using infrared luminescence (IRL). Viewing the check in the infrared region shows that the check was altered using a different black ink. The bright white writing is from the 'fluorescent' properties of one black ink that are not present in the other black ink.



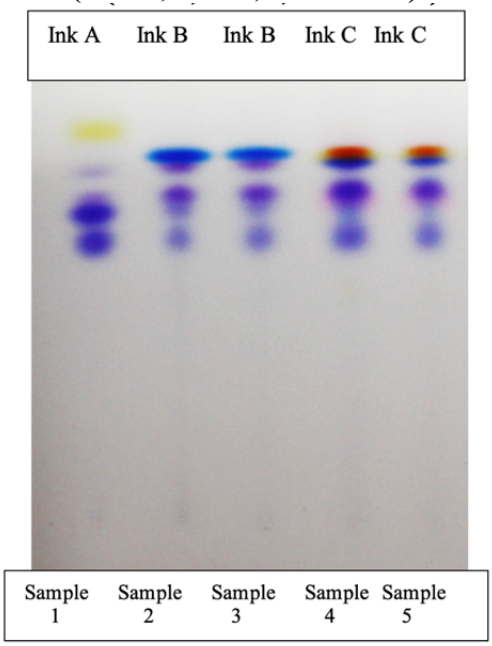
D. Chemical Examinations

33. The various ingredients of an ink can be analyzed using specialized laboratory equipment and I use two widely accepted techniques to analyze the chemical components. The first is thin-layer chromatography (TLC), and the second is gas chromatography/mass spectrometry (GC/MS). In order to conduct both TLC and GC/MS, I remove paper and ink plugs (circular discs ranging from 0.5 to 1.0 millimeter in diameter) from representative areas of the written entries with a specialized hypodermic-like device.

34. Inks are typically composed of dyes and pigments (colorants), solvents, and other trace materials. TLC is a widely used and scientifically accepted method to separate and compare the various colorants present in the inks. In order to perform TLC on ink, the ink is extracted with a solvent from the sample plugs removed from the written entries. The ink

extract is then applied, as a tiny liquid spot, onto a glass plate coated with a white chalk-like silica layer. The TLC plate is then developed with a mixture of solvents. As the TLC plate develops, the solvent mixture then diffuses up the plate by capillary action and carries the ink spot upwards. Each colorant component of the ink will move at different rates along the TLC plate due to their physical and chemical differences and stop migrating at different points. Once the TLC plate is fully developed, the multiple colorant components will appear as a pattern of spots and bands. The separated components can then be compared with the separated components of other ink samples. In the event that inks contain colorant components that separate and migrate identically, the ink formulations are then said to match each other per the *Standard for Test Methods for Forensic Writing Ink Comparison*. **Figure 3** is an example of the colorant (dyes) patterns from five (5) different ink samples. Based on the results from this demonstrative analysis, there are three (3) different patterns, and therefore, three (3) different ink formulations.

Figure 3: Example of a TLC plate with five (5) ink samples determined to be three (3) different ink formulations (Ink A, Ink B, and Ink C)



35. With respect to the chemical analysis of inks, GC/MS is used to detect and identify the non-colorant components of an ink, such as solvents and other volatile organic compounds (VOCs), which aid in the application of the ink to paper. VOCs are age-dependent and it is well established that solvent evaporation is the first process to occur once an ink is placed on a document.

36. More specifically, the rate of evaporation of 2-phenoxyethol (2-PE), a solvent found in over 85% of blue and black ballpoint writing inks, stabilizes over a period of approximately six to eighteen months and is not significant much beyond two years after the ink has been applied to paper. That is, 2-PE evaporates very quickly when an ink is first placed on paper and then eventually slows and may continue to evaporate up to 24 months after the ink has been placed on the document. After 24 months, PE no longer evaporates at a significant or measurable rate. **Figure 4** is an illustration to show how the theoretical rate at which 2-PE dissipates from an ink once the ink is placed on paper.

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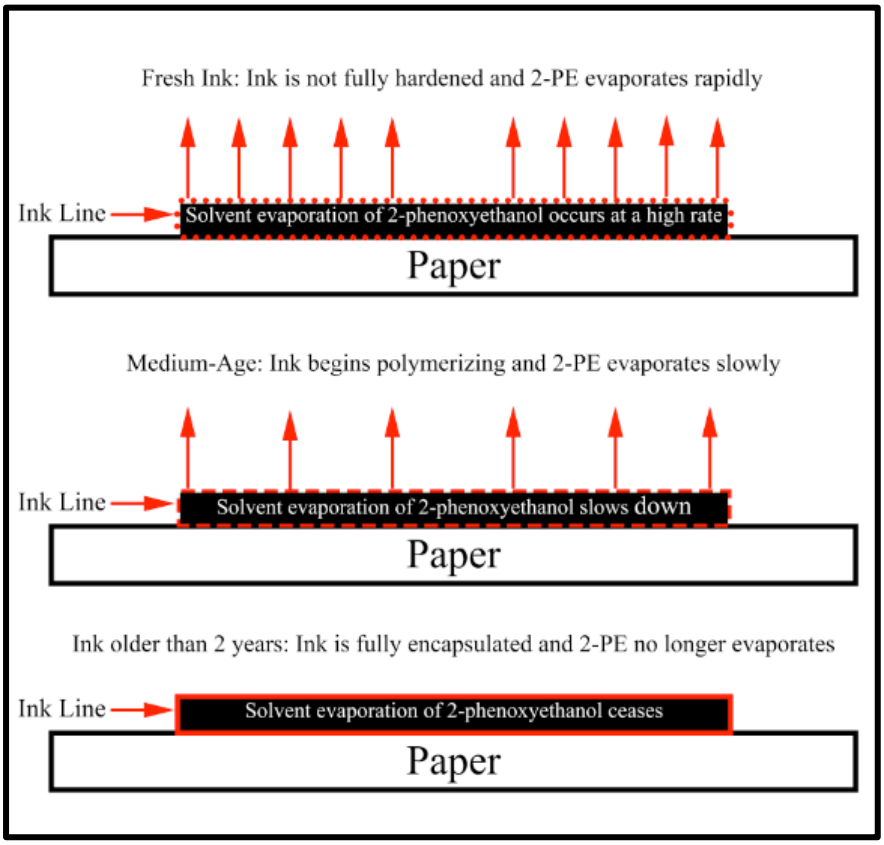
Figure 4: A theoretical illustration to show the rate at which 2-PE dissipates from ink once it has been placed on paper. Solvent evaporation is rapid in a fresh ink, becomes slower in a medium-aged ink, and then ceases to an immeasurable rate after two (2) years.



37. For ink dating, GC/MS is used to measure differences in the concentration of 2-PE when samples of the questioned ink are heated and unheated. In this method, samples of the questioned ink are removed from the document, and then one set of samples is heated, and the other set is not. A greater concentration of 2-PE will evaporate from fresh ink compared to older ink when the samples are heated at a temperature of 70 degrees Celsius (70°C) for 90 minutes. The resulting difference in the amount of 2-PE in the unheated samples compared to the amount of 2-PE in the heated samples is often referred to as the 'solvent loss ratio' (SLR). Based on extensive research by forensic laboratories throughout the world including the United States, Russia, Germany, Canada, and Sweden, comparisons

with known aged samples, and validation studies, a solvent loss ratio of 25% or more is extremely strong evidence to conclude that the ink is less than two (2) years old.[4] There are factors that may affect the concentration of 2-PE prior to testing such as storage in extreme cold, which slows the ink drying process, or extreme heat, which hastens the ink drying process, but none of these factors would be expected to cause an increase in the level of 2-PE.

38. Finally, it is important to understand that some inks are known to be 'fast aging' where they dry at an extremely fast rate within the first several weeks from the time the ink is placed on paper. Therefore, if the level of 2-PE is less than 25% then the result does not imply that the writing was definitively applied more than 2 years ago. At this time, there is no generally accepted method to conclusively identify an ink as being fast aging.

VII. OBSERVATIONS AND RESULTS FROM TESTING

39. I performed a series of physical, optical, and chemical tests[5] on the writing inks used on Q1 (000788), Q5 (000827), Q6 (000828), Q8 (000830 and 000831), Q11 (000834), and Q12 (000835). At least five (5) different inks were used to create the written entries on the aforementioned documents. The results from my testing are summarized in **Table 1** and will be referenced throughout my report.

[4] The 25% threshold level is the equivalent to a 'highly probable' conclusion as defined in the Scientific Working Group for Forensic Document Examiners: Standard Terminology for Expressing Conclusions of Forensic Document Examiners. "Highly Probable" is used to describe evidence that is very persuasive, and the examiner is virtually certain, but there is some factor that precludes the examiner from reaching absolute certainty.

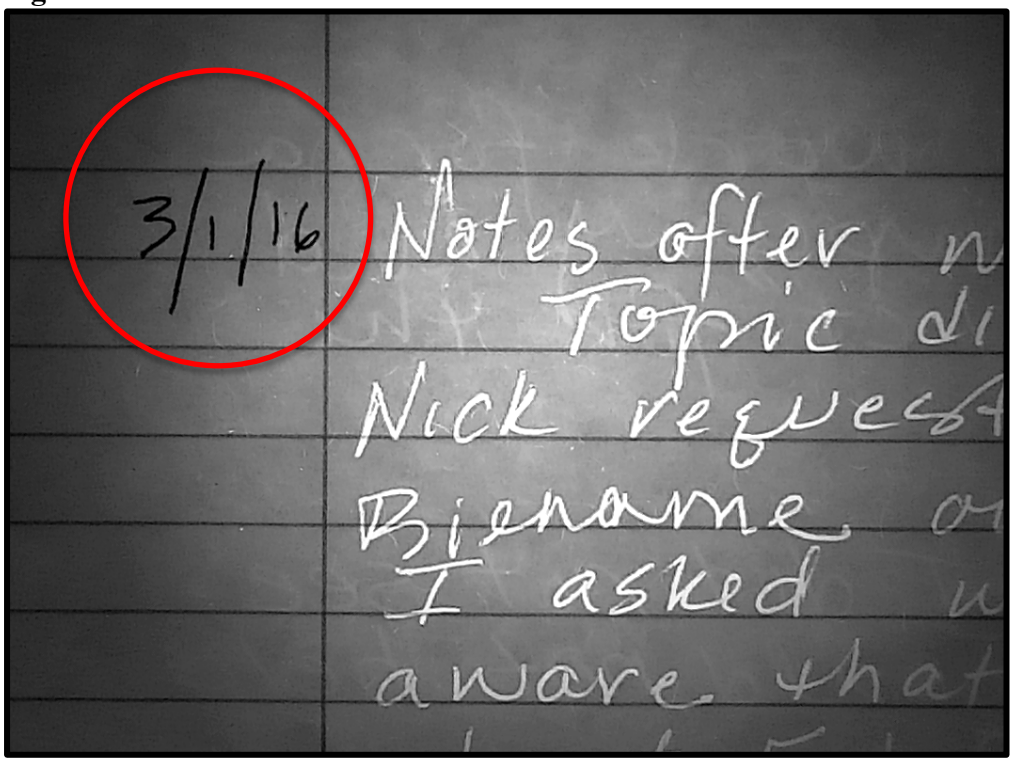
[5] The chemical testing includes thin layer chromatography (TLC) analysis.

Table 1

Document (Date)	Bates Stamp Number	Description of Entry	Color of Ink	Type of Ink	Writing Ink Formulation
Q1 (No date)	Fischman 000788	All entries except "corp (plus Aldila Inc.)" and "MCC Genomatica Litigation"	Blue	Ballpoint	Ink 1 (Blue)
Q1 (No date)	Fischman 000788	"corp (plus Aldila Inc.)" and "MCC Genomatica Litigation"	Black	Ballpoint	Ink 2 (Black)
Q5 (No date)	Fischman 000827	All entries up to "Base 200-250 20-40%"	Blue	Ballpoint	Ink 1 (Blue)
Q5 (No date)	Fischman 000827	All entries following "Base 200-250 20-40%"	Black	Ballpoint	Ink 3 (Black)
Q6 (No date)	Fischman 000828	All entries except "888" number in top left	Blue	Non-ballpoint	Ink 4 (Blue)
Q8 (3/1/16)	Fischman 000830 and 000831	All entries except the date	Black	Ballpoint	Ink 3 (Black)
Q8 (3/1/16)	Fischman 000830 and 000831	"3/1/16"	Black	Non-ballpoint	Ink 5 (Black)
Q12 (1/30/17)	Fischman 000835	All handwritten entries	Black	Ballpoint	Ink 3 (Black)

40. Based on a microscopic and optical examination using the Video Spectral Comparator (VSC), I determined that Q8 (000830/000831) was altered by adding the date 3/1/16 with a different ink than what was used for the other handwritten entries. The "3/1/16" was created with a black non-ballpoint ink (Ink 5), while the remaining written entries were executed with a black ballpoint ink (Ink 3). As shown in **Figure 5**, when I visualized Q8 using the VSC in the infrared mode, the ink used for the "3/1/16" entry exhibits different properties than the other handwritten entries.

Figure 5



41. I proceeded to focus my analysis on Q8 (000830/000831) and Q12 (000835) since the same formulation of writing ink was used for these documents, which are purported to have been executed approximately 10 months apart, and Q8 was altered with the addition of a date. Therefore, I performed an ink dating analysis on the Black Ink 3 which was used for the handwritten entries on both sides of Q8 (000830 and 000831), dated March 1, 2016. I observed significantly high levels of 2-phenoxyethanol (2-PE) that would not be expected in an ink entry that is over five (5) years old. I compared the amount of 2-PE in a set of heated samples with the amount of 2-PE in a set of unheated samples as described in paragraph 37 to calculate the solvent loss ratio (SLR). The ink entries on the front of Q8 (000830) revealed a SLR of 33% and the ink entries on the back of Q8 (000831) showed a SLR of 28%, for an average SLR of 31%. The SLR values obtained are very strong and persuasive evidence that the handwritten entries on Q8 (000830 and 000831) were not

executed on March 1, 2016. Instead, the written entries were executed within two (2) years before I performed my testing, which would have been sometime after July 31, 2019. Due to the extremely high levels of 2-PE and the average SLR of 31%, the entries are consistent with being prepared sometime within the past 6 months.

42. As shown in Table 1, Black Ink 3 was also used for the two handwritten notes on Q12 (000835), dated January 30, 2017, which is shown in **Figure 6**. I performed duplicate testing as part of my ink dating analysis on the handwritten note below the printed text. Once again, I observed significantly high levels of 2-phenoxyethanol (2-PE) that would not be expected in an ink entry that is over 4 ½ years old. I obtained SLR values of 20% and 18% for an average of 19%. I have seen values in the 'high teens' in known aged samples that were less than two (2) years old many times over the course of performing ink dating analysis hundreds of times. Given the high levels of 2-PE in this case and the SLR level of 19%, the written entry is not consistent with being executed approximately 4 ½ years ago.

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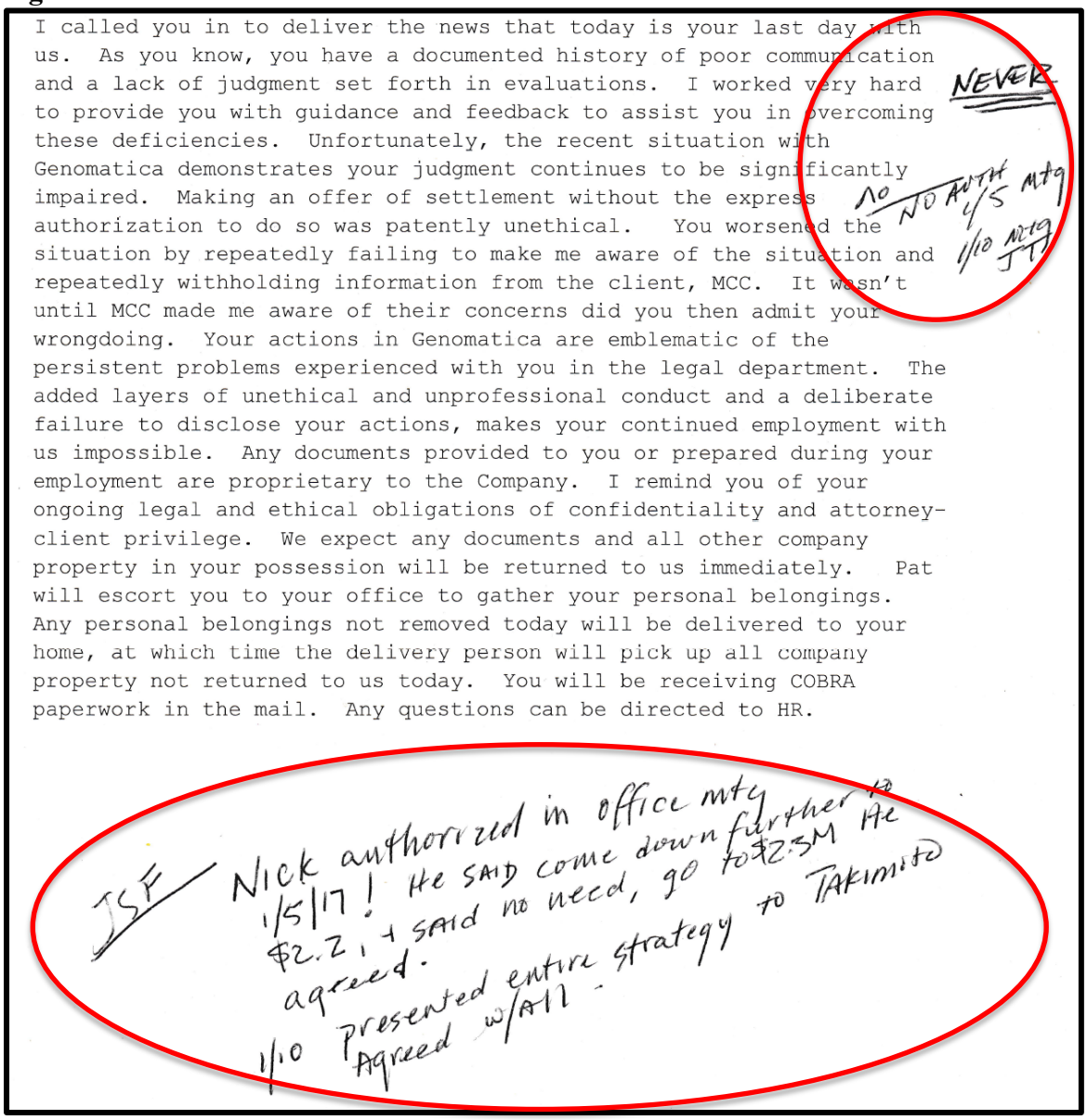
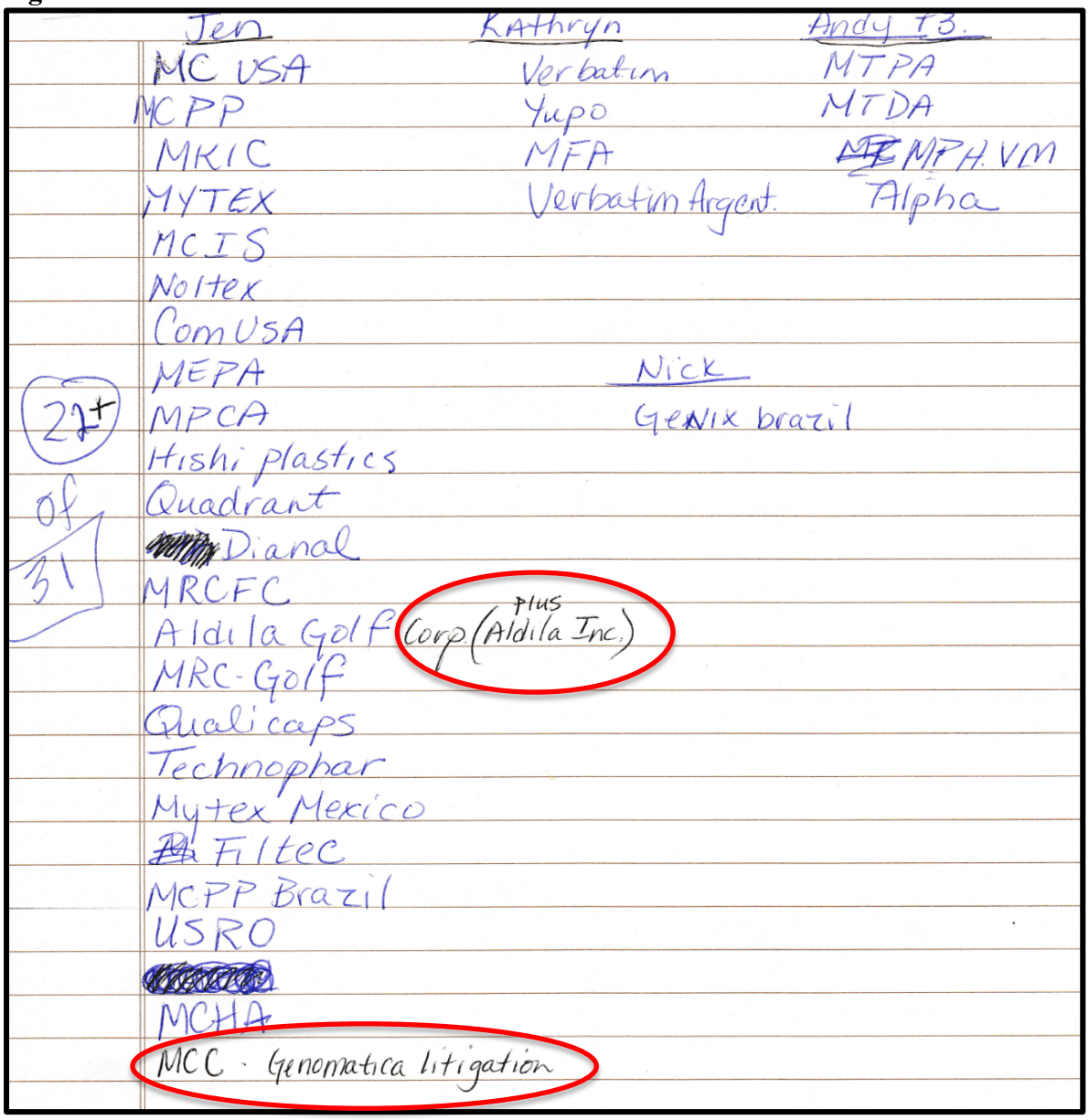
Figure 6



43. As shown in **Figure 7**, nearly all of the handwritten entries on Q1 (000788) were executed with Blue Ink 1, except two (2) added entries reading "corp. (Plus Aldila Inc.)", which follows the Aldila Golf entry in the first column and "MCC Genomatica litigation" which has been written at the bottom of the first column. Therefore, Q1 (000788) has been altered with the addition of these two (2) entries which were executed with Black Ink 2.

Figure 7



44. As described in Section VI(B), documents can be examined for the presence of indented writing or other identifying impressions (e.g., markings from printing devices), which can appear on paper from writings or other markings made to another page while it was superimposed over the questioned material. The two (2) added entries on Q1 (000788) were impressed into the front of Q12 (000835) indicating that when the two (2) entries were written on Q1, the document was over top of Q12. Although Q1 is not dated, the two (2)

entries would have been added sometime after January 30, 2017, which is the date of the Q12, and when it first came into existence.

45. I also observed some impressed writing on the front of Q6 (000828), which is considered unsourced because it did not originate from the other Questioned documents that were examined in this case.

VIII. CONCLUSION

46. Based on my professional experience, established scientific principles, and full consideration of the testing results, it is my opinion that:

(a) It is highly probable that the handwritten entries on both sides of Q8 (000830/000831) were not executed on the purported date of March 1, 2016. Instead, the written entries were executed within two (2) years before I performed my testing, which would have been sometime after July 31, 2019. Due to the extremely high levels of 2-PE and the average SLR of 31%, the results are consistent with the writing being executed as early as sometime in the past six (6) months.

(b) It is probable that the handwritten notes on Q12 (000835) were not created until after July 31, 2019, which would be sometime in the two (2) years prior to my analysis. The results from the chemical testing are not consistent with an ink that is allegedly 4 ½ years old and are far more supportive of an ink that is less than two (2) years old.

(c) Q1 has been altered with the addition of two (2) entries reading, "corp. (Plus Aldila Inc.)" and "MCC Genomatica litigation".

(d) The two (2) entries reading, "corp. (Plus Aldila Inc.)" and "MCC Genomatica litigation" were executed when over top of Q8 (000835), which means that the two

(2) entries would have been written on or after Q12 came into existence on January 30, 2017.

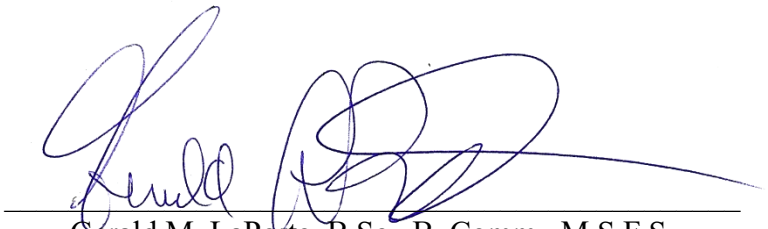
(e) Q8 has been altered with the addition of the date "3/1/16".

(f) With respect to Q6 (000828), nearly all of the handwritten entries were executed with blue non-ballpoint writing ink (e.g., gel ink, felt tip pens, and roller-ball pens); however, there are no generally accepted methods to estimate the age since non-ballpoint inks are primarily water-based and do not contain solvents that persist over months or years like ballpoint inks; and

(g) While I did examine the remaining documents, I did not perform ink dating analysis and therefore, I cannot conclude whether or not the written entries on Q1 (000788), Q5 (000827), and Q11 (0000834) were executed sometime within the past two (2) years.

47. The analyses and conclusions presented herein are based on the evidence available at this time. I reserve the right to rely upon additional discovery that occurs after this report is submitted. To the extent additional information becomes available relevant to the conclusions expressed in this report, I will update my conclusions as appropriate.

48. All of the conclusions expressed in the aforementioned paragraphs are based on widely accepted scientific principles and methodologies.



Gerald M. LaPorte, B.Sc., B. Comm., M.S.F.S.
Forensic Chemist and Document Dating Specialist

ATTACHMENT 1

GERALD M. LAPORTE
Curriculum Vitae

Positions:

Forensic Chemist & Document Dating Specialist
Riley Welch LaPorte & Associates Forensic Laboratories
Lansing, Michigan USA

Director of Research Innovation
Florida International University – Global Forensic and Justice Center

United States Department of Justice and United States Secret Service (**RET**)

Education:

University of Alabama at Birmingham (1994)
Birmingham, Alabama USA
Master of Science in Forensic Science (M.S.F.S.)

University of Windsor (1992)
Windsor, Ontario Canada
Bachelor of Commerce in Business Administration

University of Windsor (1990)
Windsor, Ontario Canada
Bachelor of Science in Biology (B.Sc.)

Professional Experience:

Florida International University (FIU), Global Forensic and Justice Center
Director of Research Innovation (07/19 – Present)
Duties: Oversee activities at the Global Forensic and Justice Center, which is an innovative resource for education, research, training and policy initiatives related to criminal justice, cyber and emerging forensic sciences.

U.S. Department of Justice, National Institute of Justice (03/09 – 07/19)
Director, Office of Investigative and Forensic Sciences
Duties: Provide expert analysis and advice on agency-wide programs or issues of national impact relating to forensic science; provide expert advice to top management officials; identify reasons for the nature and/or extent of program-related problems that arise and investigate area in need of improvement; write comprehensive resolution recommendations; formally present findings before large and diverse audiences, such as Federal, state, and local government representatives, special interest groups, the scientific community, and the media. Testify in Congress on behalf of the Department of Justice.

United States Secret Service (04/01 – 03/09)
Chief Research Forensic Chemist (11/07-03/09); Senior Document Analyst (06/05-11/07); Document Analyst (04/01-06/05)
Duties: Serve as the technical liaison and research chemist for the United States Secret Service pertaining to issues related to the chemistry of documents and fingerprints; coordinating clandestine tagging programs; direct all research projects within the Forensic Services Division.
Laboratory Duties: perform physical and chemical examinations on a variety of documents to determine how they were produced, where they may have originated from, and if they are authentic. These types of documents include anonymous letters (e.g., threatening, kidnapping, and extortion), suspected counterfeit identifications and financial documents (e.g. travelers checks, credit cards), contracts, and other miscellaneous written materials. Chemical examinations are conducted using thin layer chromatography (TLC), gas chromatography/mass spectrometry (GC/MS), liquid chromatography-mass spectrometry (LC/MS), infrared spectroscopy (IR), scanning electron microscopy/energy dispersive x-ray analysis (SEM/EDXA); perform chemical tests on unknown (e.g. miscellaneous powders) and controlled substances; testify in court as an expert witness.

Marymount University (08/08 – 01/09)
Adjunct Professor of Forensic Science
Arlington, VA
Duties: Prepare and conduct lecture material in various areas of the forensic sciences and prepare all laboratory exercises and examinations for graduate students
United States Secret Service, Washington, DC (04/01 – 03/09)

Virginia Division of Forensic Science, Richmond, VA (11/99 – 04/01)
Forensic Scientist
Duties: analyze evidence for the presence or absence of controlled substances using a variety of chemical and instrumental tests; utilize sophisticated instrumentation such as gas chromatography/mass spectrometry and Fourier transform infrared spectroscopy; testify in court as an expert witness

Anne Arundel County Police Department Crime Lab, Millersville, MD (01/99 -11/99)
Forensic Chemist
Duties: similar to the duties specified for Virginia Division of Forensic Science

Government Scientific Source (GSS), Vienna, VA (09/98-01/99)
Technical Specialist
Duties: serve as technical specialist in the sales of scientific and laboratory supplies and equipment.